

# Lead in Flint, Michigan's Drinking Water: Federal Regulatory Role

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## Related Author

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- [Mary Tiemann](#)
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Mary Tiemann, Specialist in Environmental Policy ([mtiemann@crs.loc.gov](mailto:mtiemann@crs.loc.gov), 7-5937)

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In April 2014, the city of Flint, Michigan, stopped purchasing treated water from the city of Detroit and began using the Flint River as its water source without providing [corrosion control treatment](#). (A key source of lead in drinking water is the corrosion of plumbing materials in the distribution system and households.) While some water quality changes were quickly apparent, elevated lead concentrations were identified over a longer period through monitoring conducted by the [city](#) and [others](#) and detections of elevated blood lead levels in children. On October 1, 2015, city officials urged residents to [stop drinking the water](#). On October 16, Flint [reconnected to Detroit's water](#) and advised residents not to use unfiltered tap water. The city and the governor of Michigan each declared a state of emergency. President Obama issued an [emergency declaration](#) on January 16, 2016.

On January 21, 2016, [the Environmental Protection Agency \(EPA\) issued an emergency order](#) directing the city and state to take immediate actions to address concerns over the city's water system. Requirements include, among others, that the city and state re-optimize corrosion control, post online lead monitoring results and weekly reports, and ensure the city's capacity to operate the system in compliance with federal regulations. [EPA's current Flint responses](#) include providing technical assistance for water testing and treatment, [conducting water monitoring](#), and identifying lead service line locations.

## Federal Regulatory Role

The [Safe Drinking Water Act](#) (SDWA) authorizes EPA to [regulate contaminants](#) in water supplies. SDWA regulations establish compliance obligations for public water systems (PWSs) and state agencies to which EPA has delegated primary enforcement responsibility for the PWS supervision program. Forty-nine states, including Michigan, have this authority.

States have first-line responsibilities for administering SDWA programs, providing technical assistance to systems, and compelling systems to comply with regulations. Section 1414 provides that, in addition to overseeing states, when EPA finds that a water system is not in compliance, EPA must notify the state and system and provide assistance to both in order to bring the system into compliance. If, after 30 days, a state does not initiate enforcement action, EPA must do so. Under SDWA's emergency powers (Section 1431), EPA "may take such actions as [the Administrator] may deem

necessary" to protect human health when a contaminant in a water system "may present an imminent and substantial endangerment to the health of persons" and state and local authorities have not acted. This authority is available even absent a violation. EPA used this authority to issue the [emergency order](#). (A broader CRS memorandum discussing selected federal roles and authorities is available from the author upon request.)

## Lead and Copper Rule

EPA regulates lead in drinking water through the 1991 [Lead and Copper Rule](#) (LCR), which includes use of a treatment technique (corrosion control) to prevent these metals from leaching into water. The LCR includes a lead "action level" of 15 parts per billion. If more than 10% of tap-water samples exceed the action level, a PWS has not violated the rule, but other requirements—corrosion control, public education, additional water monitoring, and lead service line replacement—can be triggered. A system violates the rule if it does not take the triggered actions. If a system plans to change its water source, the state must be [notified](#).

In October 2015, the [Michigan Department of Environmental Quality \(MDEQ\) announced](#) that it had followed the wrong monitoring protocol for Flint. Reportedly, the [city conducted water testing](#) incorrectly. In November 2015, [EPA clarified](#) corrosion control requirements for large systems that previously purchased treated water.

EPA initiated an extensive review of the LCR in 2004 after increased lead levels were detected in the District of Columbia's water following a water treatment change. EPA promulgated short-term revisions and clarifications in 2007 and continues working on comprehensive revisions. In December 2015, EPA's [National Drinking Water Advisory Council](#) presented [recommendations](#) for LCR revisions. EPA plans to propose a revised rule in 2017. Topics being evaluated include sampling protocols, lead service line replacement, corrosion control, and risk communication.

## Congressional Responses

Events in Flint have raised questions regarding the adequacy of the LCR and scope of EPA enforcement and notification authorities under SDWA.

Further, these events have focused attention on the [state of water infrastructure nationwide](#) and the maintenance and repair challenges many communities face. The Drinking Water State Revolving Fund (DWSRF) program provides assistance to systems for projects needed to comply with SDWA regulations and protect public health. The Consolidated Appropriations Act, 2016 ([P.L. 114-113](#)) includes \$863.2 million for this program. The President has requested \$1.02 billion for FY2017. (See CRS Report RS22037, [Drinking Water State Revolving Fund \(DWSRF\): Program Overview and Issues](#), by Mary Tiemann.)

In addition to attempts to [amend S. 2012](#), legislation has been introduced in response to the Flint crisis. House-passed [H.R. 4470](#) would require systems to notify customers, the state, and EPA of lead action level exceedances and require EPA to notify the public if the system or state has not done so within 24 hours after EPA receives notification. EPA would be required to develop a plan for improving information sharing and public communication. [S. 2466](#) would also authorize EPA to notify the public of action level exceedances. [S. 2587](#) would direct EPA to revise the LCR. [H.R. 4438](#) seeks \$1 billion in emergency appropriations for a grant to Michigan to replace water infrastructure. To [aid Flint residents](#), [H.R. 4479](#) would authorize infrastructure grants; increase DWSRF loan forgiveness; authorize assistance under health, education, and other programs; and require establishment of the Center on Excellence on Lead Exposure, an advisory committee, and health registry. [S. 2579](#) would require disclosure of any lead level exceedance within 15 days, provide water infrastructure loan guarantees and DWSRF capitalization grants (and increased loan forgiveness), fund public health programs, and require the establishment of a lead exposure registry and advisory committee. [H.R. 4653](#) would direct EPA to establish a lead service line replacement grant program.